

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1-9 and 28 are cancelled. Claims 10-27 were previously cancelled. Claim 28 was withdrawn by the Examiner. Claims 29-40 are added. Claims 29-40 are pending in the application.

Entry of Amendment under 37 C.F.R. § 1.116

The Applicant requests entry of this Rule 116 Response because: the amendments were not earlier presented because the Applicant believed in good faith that the cited references did not disclose the present invention as previously claimed; and the amendment does not significantly alter the scope of the claim and places the application at least into a better form for purposes of appeal.

The Manual of Patent Examining Procedures (M.P.E.P.) sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The M.P.E.P. further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

I. Rejection under 35 U.S.C. § 102

In the Office Action, at page 2, claims 1-9 were rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,384,473 B1 to Peterson et al. Claims 1-9 are cancelled, and accordingly, withdrawal of the § 102(e) rejection is respectfully requested.

II. New Claims

New independent claim 29 recites that:

a lid having wiring patterns is bonded to the substrate of said MEMS element covering an active surface of said substrate,
an operating space for said micromachine component is defined by said substrate and said lid,
electrodes of said MEMS element and wiring patterns of said lid are electrically connected at a bonded part of said substrate and said lid, and

a sealing portion is provided between said MEMS element and said lid surrounding an outside of said bonded part.

Further, new independent claim 35 recites that:

a lid is bonded through an intermediate member having wiring patterns to the substrate of said MEMS element covering an active surface of said substrate,

an operating space for said micromachine component is defined by said substrate, said intermediate member and said lid,

electrodes of said MEMS element and wiring patterns of said intermediate member are electrically connected at a bonded part of said substrate and said intermediate member, and

a sealing portion is provided between said MEMS element and said intermediate member surrounding an outside of said bonded part.

Additionally, new independent claim 41 recites:

a lid having wiring patterns bonded to the substrate of said MEMS element covering an active surface of said substrate;

electrodes of said MEMS element electrically connected at a bonded part of said substrate and said lid directly to said wiring patterns of said lid; and

a sealing portion provided between said MEMS element and said lid, sealing an outer portion of the bonded part of said substrate and said lid,

wherein an operating space for said micromachine component is defined by said substrate and said lid.

New independent claims 29, 35 and 41 patentably distinguish over the Peterson reference. Support for the new claims is found at page 23, line 3 to page 27, line 15 and Figs. 3-8.

Peterson discusses an apparatus for packaging microelectronic devices, including an integral window. The microelectronic package 8 includes a hollow assembly 10 of stacked, electrically insulating plates. Plate 16 has an electrically conductive metallized trace 24 disposed on surface 18 for conducting an electrical signal between an interior interconnect location 12 and an exterior interconnect location 14. The assembly 10 further includes a second plate 30. The surface 18 of plate 16 is bonded to the surface 34 of plate 30 to form the assembly 10. Surface 18 can comprise a bond pad 44 electrically connected to metallized trace 24 at interior interconnect location 12. The assembly 10 can include a cover lid 42 attached to surface 32 of plate 30. Plate 16 is attached to plate 30, where the attachment can comprise a seal 48 disposed in-between surface 18 and surface 34. Further, the attachment between cover

lid 42 and plate 30 can comprise a third seal 50. The bonding material for seals 48, 50 can comprise a hermetic sealant such as a solder alloy.

While Peterson discusses that the lid 42 may be attached to plate 30 by the third seal 50 and that the plate 30 may be attached to plate 16 by the seal 48, Peterson does not discuss or suggest that lid 42 includes wiring patterns that are bonded to the substrate of the MEMS element. Lid 42 does not have wiring patterns that are bonded to either plate 30 or plate 16. Lid 42 is connected to plate 30 by a seal 50, but the wiring patterns of lid 42 are not bonded directly to plate 30 or plate 16. Peterson further does not discuss that lid 42 is bonded through an intermediate member having wiring patterns to either plate 30 or plate 16, as recited in claim 35. Peterson does not discuss or suggest the use of an intermediate member that bonds the lid, which is distinct from a sealing portion.

The Examiner refers to metallized trace 82 in Fig. 5 as wiring patterns of the lid. It is unclear as to how metallized trace 82 disposed on the surface of plate 30 corresponds to a wiring pattern of the lid 42. It is unclear exactly what the Examiner is referring to in referencing wiring patterns of the lid 42. Additionally, even assuming, *arguendo*, that the lid 42 includes wiring patterns, Peterson does not discuss or suggest that wiring patterns of the lid 42 are bonded to part of plate 30 or plate 16.

In addition, Peterson does not discuss or suggest that electrodes of an MEMS element and wiring patterns of the lid are electrically connected at a bonded part of a substrate and a lid and does not discuss or suggest that a sealing portion is provided between the MEMS element and the lid surrounding an outside of the bonded part. Peterson discusses only that seal 50 and 48 are attached between the lid 42 and the plate 30 and the plate 30 and plate 16, respectively. Peterson is completely silent as to electrodes of an MEMS elements and wiring patterns of the lid 42 being electrically connected at a bonded part of a substrate and the lid 42.

The Examiner alleges that seal 50 may be a solder alloy and therefore would result in electrical connection, presumably between metallized trace 24 and lid 42. While not conceding that the Examiner is correct as to the assertion that the seal 50 would provide for electrical connection between wiring patterns of the lid 42 and substrate 16 through seal 48, plate 30 and seal 50 because Peterson lacks any discussion of this occurrence, even assuming, *arguendo*, that the assertion is correct, the electronic component 24 and wiring patterns of the lid 42 would be considered to be electrically connected by the bonded parts of plate 16 and plate 30 (seal 48) and the bonded parts of plate 30 and lid 42 (seal 50). Peterson does not suggest that electrodes of the MEMS element and wiring patterns of lid 42 are electrically connected at a

bonded part of plate 16 and lid 42. Peterson only shows and discusses that the seals 50 and 48 attach the lid 42 and plate 30 to each other and the plates 30 and 16 to one another.

In addition, Peterson does not discuss or suggest that a sealing portion is provided between an MEMS element and the lid 42 surrounding an outside of the bonded part. The bonded part in Peterson is the seal 50 and seal 48. Peterson does not suggest that a sealing portion surrounds an outside of a bonded part, the bonded part being between a substrate and the lid. Peterson further does not discuss or suggest that a sealing portion is provided between an MEMS element and an intermediate member surrounding an outside of a bonded part of a substrate and the intermediate member. Further, Peterson does not discuss that a sealing portion is provided between an MEMS element and said lid, sealing an outer portion of the bonded part of the substrate and the lid.

Therefore, as Peterson does not discuss or suggest all the features of independent claims 29, 35 and 41, claims 29, 35 and 41 patentably distinguish over the reference relied upon.

Claims 30-34 and 36-40 depend either directly or indirectly from independent claims 29 and 35 and include all the features of their respective independent claims, plus additional features that are not discussed or suggested by the reference relied upon. For example, claim 30 recites that "the bonded part is an ultrasonic bonded part of said substrate and said lid." Therefore, claims 30-34 and 36-40 patentably distinguish over the reference relied upon for at least the reasons noted above.

Conclusion

In accordance with the foregoing, claims 1-9 and 28 have been cancelled. Claims 10-27 were previously cancelled. Claims 29-41 were added. Claims 29-41 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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